Biochemical Pharmacology

VOLUME 56, 1998

VOLUME CONTENTS, AUTHOR AND SUBJECT INDEX

ELSEVIER

CONTENTS OF VOLUME 56

1 JULY 1998

Commentaries

JOHN R. KLEIN — 1 — Hormone regulation of immune homeostasis: Local or long distance?

M. TIEN KUO, SUBRATA SEN, WALTER N. HITTELMAN AND T. C. HSU — 7 — Chromosomal fragile sites and DNA amplification in drug-resistant cells

Molecular and Cellular Pharmacology

BERTRAND ROCHAT, MARKUS KOSEL, GILLES BOSS, BERNARD TESTA, MICHEL GILLET AND PIERRE BAUMANN — 15 — Stereoselective biotransformation of the selective serotonin reuptake inhibitor citalopram and its demethylated metabolites by monoamine oxidases in human liver

SAMANTHA E. GEORGE, PETER J. BUNGAY AND LOUISE H. NAYLOR — 25 — Functional analysis of the D_{2L} dopamine receptor expressed in a cAMP-responsive luciferase reporter cell line

KEVIN D. BUNTING AND ALAN J. TOWNSEND — 31 — Dependence of aldehyde dehydrogenase-mediated oxazaphosphorine resistance on soluble thiols: Importance of thiol interactions with the secondary metabolite acrolein

ANN R. KLEMM, DENISE YOUNG AND JOHN B. LLOYD — 41 — Effects of polyethyleneimine on endocytosis and lysosome stability

KRISTINA R. K. STICHA, CARL P. BERGSTROM, CARSTON R. WAGNER AND PATRICK E. HANNA — 47 — Characterization of hamster recombinant monomorphic and polymorphic arylamine *N*-acetyltransferases: Bioactivation and mechanism-based inactivation studies with *N*-hydroxy-2-acetylaminofluorene

SAVITA KHANNA, CHANDAN K. SEN, SASHWATI ROY, MARIE-ODILE CHRISTEN AND LESTER PACKER — 61 — Protective effects of anethole dithiolethione against oxidative stress-induced cytotoxicity in human jurkat T cells

MARIE CHABOT-FLETCHER AND JOHN J. BRETON — 71 — Effect of staurosporine on transcription factor NF-κB in human keratinocytes

KENSAKU OKAMOTO, HIROTOSHI TANAKA, YUICHI MAKINO AND ISAO MAKINO — 79 — Restoration of the glucocorticioid receptor function by the phosphodiester compound of vitamins C and E, EPC-K1 (L-ascorbic acid 2-[3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2*H*-1-benzopyran-6-yl hydrogen phosphate] potassium salt), via a redox-dependent mechanism

Chemotherapy and Metabolic Inhibitors

XIANHUA YIN, HUIYUN WU, YAN CHEN AND Y. JAMES KANG — 87 — Induction of antioxidants by adriamycin in mouse heart

BURT GOLDBERG, DONNA RATTENDI, DAVID LLOYD, JANICE R. SUFRIN AND CYRUS J. BACCHI — 95 — Effects of intermediates of methionine metabolism and nucleoside analogs on *S*-adenosylmethionine transport by *Trypanosoma brucei brucei* and a drug-resistant *Trypanosoma brucei rhodesiense*

WEB-YI GAO, BING-SEN ZHOU, DAVID G. JOHNS, HIROAKI MITSUYA AND YUN YEN — 105 — Role of the M2 subunit of ribonucleotide reductase in regulation by hydroxyurea of the activity of the anti-HIV-1 agent 2′,3′-dideoxyinosine

Neuroscience

STEVEN R. CHILDERS, RUOYU XIAO, LESLIE VOGT AND LAURA J. SIM — 113 — Lack of evidence of κ_2-selective activation of G-proteins: κ opiod receptor stimulation of [^{35}S] GTPγS binding in guinea pig brain

Hormones and Growth Factors

GENE C. NESS, DAYAMI LOPEZ, CHRISTOPHER M. CHAMBERS, WILLIAM P. NEWSOME, PETER CORNELIUS, CATHERINE A. LONG AND H. JAMES HARWOOD, JR. — 121 — Effects of L-triiodothyronine and the thyromimetic L-94901 on serum lipoprotein levels and hepatic low-density lipoprotein receptor, 3-hydroxy-3-methylglutaryl coenzyme A reductase, and apo A-I gene expression

Gene Expression and Development

TSUTOMU SAKUMA, MINAKO HIEDA, TOMOKO IGARASHI, SATORU OHGIYA, RYOICHI NAGATA, NOBUO NEMOTO AND TETSUYA KAMATAKI — 131 — Molecular cloning and functional analysis of cynomolgus monkey CYP1A2

Inflammation and Immunopharmacology
EVELYN ALBRECHT-GOEPFERT, HARALD SCHEMPP AND ERICH F. ELSTNER 141 Modulation of the production of reactive oxygen species by pre-activated neutrophils by aminoadamantane derivatives

15 JULY 1998

Commentaries

M. TIZIANA CORASANITI, GIACINTO BAGETTA, DOMENICANTONIO ROTIROTI AND GIUSEPPE NISTICO 153 The HIV envelope protein gp120 in the nervous system: Interactions with nitric oxid, interleukin-1β and nerve growth factor signalling, with pathological implications *in vivo* and *in vitro*

SHERI M. FUJIHARA AND STEVEN G. NADLER 157 Modulation of nuclear protein import: A novel means of regulating gene expression

GERNOT W. WOLKERSDÖRFER AND STEFAN R. BORNSTEIN 163 Tissue remodelling in the adrenal gland

Molecular and Cellular Pharmacology
ELINOR J. GRIFFITHS, HUA LIN AND M. SAADEH SULEIMAN 173 NADH fluorescence in isolated guinea-pig and rat cardiomyocytes exposed to low or high stimulation rates and effect of metabolic inhibition with cyanide

SHEWAN M. AZIZ, DAVID R. WORTHEN, MUSTAFA YATIN, KENNETH B. AIN AND PETER A. CROOKS 181 A unique interaction between polyamine and multidrug resistance (P-glycoprotein) transporters in cultured Chinese hamster ovary cells transfected with mouse *mdr-1* gene

WEIQUN WANG, LUCY Q. LIU, CARL M. HIGUCHI AND HONGWEI CHEN 189 Induction of NADPH:Quinone reductase by dietary phytoetrogens in colonic colo205 cells

HENRY P. CIOLINO, PHILLIP J. DASCHNER, THOMAS T. Y. WANG AND GRACE CHAO YEH 197 Effect of curcumin on the aryl hydrocarbon receptor and cytochrome P450 1A1 in MCF-7 human breast carcinoma cells

ATHANASSIA SIAFAKA-KAPADAI, MARINIS PATIRIS, CHARLES BOWDEN AND MARTIN JAVORS 207 Incorporation of [^{3}H]valproic acid into lipids in GT1–7 neurons

Chemotherapy and Metabolic Inhibitors
TAKAKO YOKOZAWA, CUI PING CHEN, ERBO DONG, TAKASHI TANAKA, GEN-ICHIRO NONAKA AND ITSUO NISHIOKA 213 Study on the inhibitory effect of tannins and flavonoids against the 1,1-diphenyl-2-picrylhydrazyl radical

MASATO CHIBA, JOY A. NISHIME, I-WU CHEN, KARI J. VASTAG, YOUSIF S. SAHLY, BYEONG MOON KIM, BRUCE D. DORSEY, JOSEPH P. VACCA AND JIUNN H. LIN 223 Metabolite-P450 complex formation by methylenedioxyphenyl HIV protease inhibitors in rat and human liver microsomes

ALLYSON L. PARR, JAMES C. DRAKE, RONALD E. GRESS, GRETCHEN SCHWARTZ, SETH M. STEINBERG AND CARMEN J. ALLEGRA 231 5-Fluorouracil-mediated thymidylate synthase induction in malignant and nonmalignant human cells

Neuroscience
RAGURU P. RUKMINI DEVI AND CHINTA R. K. MURTHY 237 Region-specific changes in CNS muscarinic acetylcholine receptors in a rat model of hyperammonemia

Gene Expression and Development
HIROSHI YAMAZAKI, KIYOSHI INOUE, KOJI CHIBA, NAOKI OZAWA, TAKAO KAWAI, YASUHIKO SUZUKI, JOYCE A. GOLDSTEIN, F. PETER GUENGERICH AND TSUTOMU SHIMADA 243 Comparative studies on the catalytic roles of cytochrome P450 2C9 and its cys- and leu-variants in the oxidation of warfarin, flurbiprofen, and diclofenac by human liver microsomes

PATRICK J. BRASSIL, KHADIJA DEBRI, HIRONORI NAKURA, SHINICHI KOBAYASHI, DONALD S. DAVIES AND ROBERT J. EDWARDS 253 Reduced hepatic expression of CYP7A1 and CYP2C13 in rats with spontaneous hyperlipidaemia

Inflammation and Immunopharmacology

PATRICIA L. RAMSAY, CHARLES V. SMITH, ROBERT S. GESKE, CHARLES A. MONTGOMERY AND STEPHEN E. WELTY — 259 Dexamethasone enhancement of hyperoxic lung inflammation in rats independent of adhesion molecule expression

1 AUGUST 1998

Commentaries

MARCO LOPEZ-ILASACA — 269 Sinaling from G-protein-coupled receptors to mitogen-activated protein (MAP)-kinase cascades

SAMPATH PARTHASARATHY, NALINI SANTANAM AND NATHALIE AUGÉ — 279 Oxidized low-density lipoprotein, a two-faced Janus in coronary artery disease?

Rapid Communications

SHUXIAN HU, PHILLIP K. PETERSON AND CHUN C. CHAO — 284 κ-Opioid modulation of human microglial cell superoxide anion generation

BURT M. SHARP, GENYA GEKKER, MING D. LI, CHUN C. CHAO AND PHILLIP K. PETERSON — 289 δ-Opioid suppression of HIV-1 expression in T cells (Jurkat)

Molecular and Cellular Pharmacology

GABRIEL AMITAI, DEBORAH MOORAD, RACHEL ADANI AND B. P. DOCTOR — 293 Inhibition of acetylcholinesterase and butyrylcholinesterase by chlorpyrifos-oxon

KLAUS ZWICKER, WERNER DAMERAU, SERGEY DIKALOV, HARDY SCHOLTYSSEK, INGOLF SCHIMKE AND GUIDO ZIMMER — 301 Superoxide radical scavenging by phenolic bronchodilators under aprotic and aqueous conditions

GARRY G. GRAHAM AND ANTHONY J. KETTLE — 307 The activation of gold complexes by cyanide produced by polymorphonuclear leukocytes. III. The formation of aurocyanide by myeloperoxidase

KEVIN J. SALIBA, PETER I. FOLB AND PETER J. SMITH — 313 Role for the *Plasmodium falciparum* digestive vacuole in chloroquine resistance

EMILE F. NUWAYSIR, YVONNE P. DRAGAN, RAY MCCAGUE, PATRICE MARTIN, JOHN MANN, V. CRAIG JORDAN AND HENRY C. PITOT — 321 Structure–activity relationships for triphenylethylene antiestrogens on hepatic phase-I and phase-II enzyme expression

HIROMI SAKAGUCHI, HISAYUKI YOKOKURA, OSAMU TERADA, YASUHITO NAITO, YUJI NIMURA AND HIROYOSHI HIDAKA — 329 Unique inhibitory action of the synthetic compound 2-[*N*-(2-aminoethyl)-*N*-(5-isoquinolinesulfonyl)] amino-*N*-(4-chlorocinnamyl)-*N*-methylbenzylamine (CKA-1306) against calcium/calmodulin-dependent protein kinase 1

CHRISTINE B. BREZDEN, LEORA HORN, ROBERT A. MCCLELLAND AND A. MICHAEL RAUTH — 335 Oxidative stress and 1-methyl-2-nitroimidazole cytotoxicity

DALE R. GRABOWSKI, GEORGE R. DUBYAK, LISA RYBICKI, HIROYOSHI HIDAKA AND RAM GANAPATHI — 345 Tumor cell resistance to topoisomerase II poisons: Role for intracellular free calcium in the sensitization by inhibitors of calcium-calmodulin-dependent enzymes

Chemotherapy and Metabolic Inhibitors

ELZBIETA PASTWA, EWA CIESIELSKA, MARIOLA K. PIESTRZENIEWICZ, WILLIAM A. DENNY, MAREK GNIAZDOWSKI AND LESZEK SZMIGIERO — 351 Cytotoxic and DNA-damaging properties of *N*-[2-(dimethylamino)ethyl]acridine-4-carboxamide (DACA) and its analogues

SAEKO OIKAWA, KOHSUKE NISHINO, HINJI OIKAWA, SUMIKO INOUE, TAMIO MIZUTANI AND SHOSUKE KAWANISHI — 361 Oxidative DNA damage and apoptosis induced by metabolites of butylated hydroxytoluene

Neuroscience

PADMASHREE S. TIRUMALAI, SHUBHADA BHAMRE, S. C. UPADHYA, MICHAEL R. BOYD AND VIJAYALAKSHMI RAVINDRANATH — 371 Expression of multiple forms of cytochrome P450 and associated monooxygenase activities in rat brain regions

Gene Expression and Development

ROBERT J. EDWARDS, DELYTH A. ADAMS, PATRICIA S. WATTS, DONALD S. DAVIES AND ALAN R. BOOBIS — 377 Development of a comprehensive panel of antibodies against the major xenobiotic metabolising forms of cytochrome P450 in humans

Inflammation and Immunopharmacology

BENGT JACOBSSON, SVEN BRITTON, YVONNE TÖRNEVIK AND STAFFAN ERIKSSON — 389 Decrease in thymidylate kinase activity in peripheral blood mononuclear cells from HIV-infected individuals

CHUN C. CHAO, GENYA GEKKER, SHUXIAN HU, FRED KRAVITZ AND PHILLIP K. PETERSON — 397 κ-Opioid potentiation of tumor necrosis factor-α-induced anti-HIV-1 activity in acutely infected human brain cell cultures

15 AUGUST 1998

Commentaries

JEFFREY CUMMINGS, VICTORIA J. SPANSWICK, MARIA TOMASZ AND JOHN F. SMYTH — 405 Enzymology of mitomycin C metabolic activation in tumour tissue: Implications for enzyme-directed bioreductive drug development

KAYOKO KINBARA, HIROYUKI SORIMACHI, SHOICHI ISHIURA AND KOICHI SUZUKI — 415 Skeletal muscle-specific calpain, p94: Structure and physiological function

FRANCES M. PLATT AND TERRY D. BUTTERS — 421 New therapeutic prospects for the glycosphingolipid lysosomal storage diseases

Molecular and Cellular Pharmacology

NORCHEN CHENOUFI, BERNARD DRÉNOU, OLIVIER LORÉAL, CHRISTELLE PIGEON, PIERRE BRISSOT AND GÉRARD LESCOAT — 431 Antiproliferative effect of deferiprone on the Hep G2 cell line

DENNIS M. PEFFLEY, APURBA K. GAYEN AND OLIVIER H. MORAND — 439 Down-regulation of 3-hydroxy-3-methylglutaryl coenzyme A reductase mRNA levels and synthesis in Syrian hamster C100 cells by the oxidosqualene cyclase inhibitor [4′-(6-allyl-ethyl-amino-hexyloxy)-2′-fluoro-phenyl]-(4-bromophenyl)-methanone (Ro 48-8071): Comparison to simvastatin

MICHELLE DENIS-GAY, JEAN-MICHEL PETIT, JEAN-PIERRE MAZAT AND MARIE-HÉLÈNE RATINAUD — 451 Modifications of oxido-reductase activities in adriamycin-resistant leukaemia K562 cells

EVA RASMUSSEN, BIRGITTA ASK, NIKLAS FINNSTRÖM, ANNA SKOTTNER-LUNDIN AND ANDERS RANE — 459 Insulin-like growth factor 1 (IGF-1) effects on sex-specific cytochrome P450 enzymes in normal and hypophysectomised male rats

ARUN K. CHAKRABARTI, PRABHATI RAY, CLARENCE A. BROOMFIELD AND RADHARAMAN RAY — 467 Purification and characterization of protease activated by sulfur mustard in normal human epidermal keratinocytes

MATT J. CHEESMAN AND PAUL E. B. REILLY — 473 Differential inducibility of specific mRNA corresponding to five CYP3A isoforms in female rat liver by RU486 and food deprivation: Comparison with protein abundance and enzymic activities

BRUCE L. MARTIN — 483 Inhibition of calcineurin by the tyrphostin class of tyrosine kinase inhibitors

YONG KEUN KIM, SUN HEE KO, JAE SUK WOO, SANG HO LEE AND JIN SUP JUNG — 489 Difference in H_2O_2 toxicity between intact renal tubules and cultured proximal tubular cells

FRANCIS BICHAT, GUADALUPE SOLIS-RECENDEZ, MARIE-GWENAELLE POULLAIN, MARIE-FRANCE POUPON, DAVID KHAYAT AND GERARD BASTIAN — 497 S9788 modulation of P-glycoprotein- and multidrug-related protein-mediated multidrug resistance by servier 9788 in doxorubicin-resistant MCF7 cells

DOMINIQUE PERRIN, BENOÎT VAN HILLE AND BRIDGET T. HILL — 503 Differential sensitivities of recombinant human topoisomerase IIα and β to various classes of topoisomerase II-interacting agents

Chemotherapy and Metabolic Inhibitors

ALAN STEWARD, ROBIN A. CHRISTIAN, KAREN O. HAMILTON AND PAUL L. NICKLIN — 509 Co-administration of polyanions with a phosphorothioate oligodeoxynucleotide (CGP 69846A): A role for the scavenger receptor in its *in vivo* disposition

Hormones and Growth Factors

PATRICK BRACHET, JAMES E. LONG AND EDWARD R. SEIDEL — 517 Selective sites for polyamine binding to rabbit intestinal brush-border membranes

SHEU-LING LEE, WEI-WEI WANG, JOSEPH LANZILLO, C. NORMAN GILLIS AND BARRY L. FANBURG — 527 Superoxide scavenging effect of *Ginkgo biloba* extract on serotonin-induced mitogenesis

Inflammation and Immunopharmacology

CLAUDE CHAVIS, ISABELLE VACHIER, JEAN BOUSQUET, PHILIPPE GODARD AND PASCAL CHANEZ — 535 Generation of eicosanoids from 15(S)-hydroxyeicosatetraenoic acid in blood monocytes from steroid-dependent asthmatic patients

Gastrointestinal and Renal Pharmacology

TOMOHIRO YANO, YOSHIHISHA YANO, SABURO HORIKAWA, HISASHI OZASA, SHIGERU OKADA, SHUZO OTANI AND KIYOKAZU HAGIWARA — 543 Regenerative response in acute renal failure due to vitamin E deficiency and glutathione depletion in rats

1 SEPTEMBER 1998

Commentaries

VIJAYALAKSHMI RAVINDRANATH — 547 Metabolism of xenobiotics in the central nervous system: Implications and challenges

BJARKE EBERT, CHRISTIAN THORKILDSEN, STEEN ANDERSEN, LONA L. CHRISTRUP AND HANS HJEDS — 553 Opioid analgesics as noncompetitive *N*-methyl-D-aspartate (NMDA) antagonists

Molecular and Cellular Pharmacology

SOOK-KEUN SONG, SE-YOUNG CHOI AND KYONG-TAI KIM — 561 Opposing effects of protein kinase A and C on capacitative calcium entry into HL-60 promyeloctyes

SIRKKU T. SAARIKOSKI, TARJA S. IKONEN, TEIJA OIENONEN, KAI O. LINDROS, ISMO ULMANEN AND KIRSTI HUSGAFVEL-PURSIAINEN — 569 Induction of UDP-glycosyltransferase family 1 genes in rat liver: Different patterns of mRNA expression with two inducers, 3-methylcholanthrene and β-naphthoflavone

JEREMY PRESLAND AND PHILIP G. STRANGE — 577 Pharmacological characterisation of the D_2 dopamine receptor expressed in the yeast *Schizosaccharomyces pombe*

HIDEAKI TOGASHI, YOSHIYUKI MIZUSHINA, MASAHARU TAKEMURA, FUMIO SUGAWARA, HIROYUKI KOSHINO, YASUAKI ESUMI, JUN UZAWA, HIROYUKI KUMAGAI, AKIO MATSUKAGE, SHONEN YOSHIDA AND KENGO SAKAGUCHI — 583 4-Hydroxy-17-methylincisterol, an inhibitor of DNA polymerase-α activity and the growth of human cancer cells *in vitro*

JEFFREY P. THOMPSON AND CARA-LYNNE SCHENGRUND — 591 Inhibition of the adherence of cholera toxin and the heat-labile enterotoxin of *Escherichia coli* to cell-surface GM1 by oligosaccharide-derivatized dendrimers

WEI LI, PATRICIA A. HARPER, BING-KOU TANG AND ALLAN B. OKEY — 599 Regulation of cytochrome P450 enzymes by aryl hydrocarbon receptor in human cells: CYP1A2 expression in the LS180 colon carcinoma cell line after treatment with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin or 3-methylcholanthrene

Chemotherapy and Metabolic Inhibitors

SUSAN M. BAILEY, ALEX D. LEWIS, RICHARD J. KNOX, LAURENCE H. PATTERSON, GEOFF R. FISHER AND PAUL WORKMAN — 613 Reduction of the indoloquinone anticancer drug EO9 by purified DT-diaphorase: A detailed kinetic study and analysis of metabolites

XIAOYING CHEN, POLLY PINE, A. MERRILL KNAPP, DANIEL TUSÉ AND KEITH R. LADEROUTE — 623 Oncocidin A1: A novel tubulin-binding drug with antitumor activity against human breast and ovarian carcinoma xenografts in nude mice

SHUJIE WANG, CHENG-YE GUO, ANTHONY CASTILLO, PAUL DENT AND STEVEN GRANT — 635 Effect of bryostatin 1 on taxol-induced apoptosis and cytotoxicity in human leukemia cells (U937)

Neuroscience

MANSOURIA MERAD-BOUDIA, ANNIE NICOLE, DOMINIQUE SANTIARD-BARON, CHRISTOPHE SAILLÉ AND IRÈNE CEBALLOS-PICOT — 645 Mitochondrial impairment as an early event in the process of apoptosis induced by glutathione depletion in neuronal cells: Relevance to Parkinson's disease

Inflammation and Immunopharmacology

MASSIMILIANO M. CORSI, HUBERT H. MAES, KEN WASSERMAN, ALESSANDRO FULGENZI, GIANFRANCO GAJA AND MARIA ELENA FERRERO — 657 Protection by L-2-oxothiazolidine-4-carboxylic acid of hydrogen peroxide-induced CD3 and CD16 ζ chain down-regulation in human peripheral blood lymphocytes and lymphokine-activated killer cells

663 Additions and Corrections

15 SEPTEMBER 1998

Commentaries

COLIN J. MASTERS — 667 On the role of the peroxisome in the metabolism of drugs and xenobiotics

THOMAS SCHEIBEL AND JOHANNES BUCHNER — 675 The Hsp90 complex—A super-chaperone machine as a novel drug target

FATIH M. UCKUN — 683 Bruton's tyrosine kinase (BTK) as a dual-function regulator of apoptosis

Molecular and Cellular Pharmacology

JEANNETTE J. C. PAULUSSEN, MARCEL J. E. FISCHER, RAMON L. ROOZENDAAL, INENT C. VAN DER HEIJDEN, PETER VAN DIJKEN, NICO J. DE MOL AND LAMBERT H. M. JANSSEN — 693 Effects of oxatomide and derivatives on high-affinity IgE receptor-activated signal transduction pathways in rat basophilic leukemia cells: Role of protein typrosine hyperphosphorylation and inhibition of extracellular calcium influx

ROBERTA PIVA, ELISABETTA LAMBERTINI, LETIZIA PENOLAZZI, MARIA C. FACCIOLO, ANNALISA LODI, GIANLUCA AGUIARI, CLAUDIO NASTRUZZI AND LAURA DEL SENNO — 703 *In Vitro* stability of polymerase chain reaction-generated DNA fragments in serum and cell extracts

CHEPPAIL RAMACHANDRAN, HIROSHI KUNIKANE, WEI YOU AND AWTAR KRISHAN — 709 Phorbol ester-induced P-glycoprotein phosphorylation and functionality in the HTB-123 human breast cancer cell line

ROBERT L. SHEPARD, MARK A. WINTER, SUZANNE C. HSAIO, HOMER L. PEARCE, WILLIAM T. BECK AND ANNE H. DANTZIG — 719 Effect of modulators on the ATPase activity and vanadate nucleotide trapping of human P-glycoprotein

729 Differential effects of thiocyanate on the binding thermodynamics of bicuculline methiodide versus SR95531 (gabazine) to the γ-aminobutyric acid receptor-ionophore complex

Chemotherapy and Metabolic Inhibitors

MARKO VEZMAR AND ELIAS GEORGES — 733 Direct binding of chloroquine to the multidrug resistance protein (MRP): Possible role for MRP in chloroquine drug transport and resistance in tumor cells

XIANG CHEN AND GERALD BATIST — 743 Sensitization effect of L-2-oxothiazolidine-4-carboxylate on tumor cells to melphalan and the role of 5-oxo-L-polinase in glutathione modulation in tumor cells

Neuroscience

LIZA BORNMAN, HELENE ROSSOUW, GEORGES S. GERICKE AND BARBARA S. POLLA — 751 Effects of iron deprivation on the pathology and stress protein expression in murine X-linked muscular dystrophy

Inflammation and Immunopharmacology

TERESA SANCHEZ AND JUAN J. MORENO — 759 Induction by interleukin-1β peptide of prostaglandin E_2 formation via enhanced prostaglandin H synthase-2 expression in 3T6 fibroblasts

Gastrointestinal and Renal Pharmacology

CLAUDIO JÖSCH, HELMUT SIES AND THEODORUS P. M. AKERBOOM — 763 Hepatic mercapturic acid formation: Involvement of cystolic cysteinylglycine S-conjugate dipeptidase activity

PABLO MURIEL — 773 Nitric oxide protection of rat liver from lipid peroxidation, collagen accumulation, and liver damage induced by carbon tetrachloride

1 OCTOBER 1998

Commentaries

GARET P. LAHVIS AND CHRISTOPHER A. BRADFIELD — 781 *Ahr* null alleles: Distinctive or different?

MICHAEL W. SALTER — 789 Src, *N*-methyl-D-aspartate (NMDA) receptors, and synaptic plasticity

Molecular and Cellular Pharmacology

RUTH LINDMAR AND KONRAD LÖFFELHOLZ — 799 Phospholipase D in rat myocardium: Formation of lipid messengers and synergistic activation by G-protein and protein kinase C

CLAIRE ROBSON, KAREN A. WRIGHT, PETER R. TWENTYMAN, PETER A. LAMBERT AND ROGER J. GRIFFIN — 807 Chemical synthesis and biological properties of novel fluorescent antifolates in Pgp- and MRP-overexpressing tumour cell lines

VÉRONIQUE CARRIÈRE, ELISABETH DUSSAULX, MONIQUE ROUSSET, ALAIN ZWEIBAUM AND DANIÈLE CAMBIER — 817 Decreased expression of γ-glutamyltranspeptidase in the intestinal cell line Caco-2 by inducers of cytochrome P450 1A1

Z. SYLVIA ZHAO, SUMSULLAH KHAN AND PETER J. O'BRIEN — 825 Catecholic iron complexes as cytoprotective superoxide scavengers against hypoxia:reoxygenation injury in isolated hepatocytes

SHRIPAD V. BHAGWAT, C. VIJAYASARATHY, HAIDER RAZA, JAYATI MULLICK AND NARAYAN G. AVADHANI — 831 Preferential effects of nicotine and 4-(*N*-methyl-*N*-nitrosamino)-1-(3-pyridyl)-1-butanone on mitochondrial glutathione *S*-transferase A4-4 induction and increased oxidative stress in the rat brain

Chemotherapy and Metabolic Inhibitors

ARISTIDE FLORIDI, TIZIANA BRUNO, STEFANIA MICCADEI, MAURIZIO FANCIULLI, ANTONIO FEDERICO AND MARCO G. PAGGI — 841 Enhancement of doxorubicin content by the antitumor drug lonidamine in resistant Ehrlich ascites tumor cells through modulation of energy metabolism

SIGRID HATSE, LIEVE NAESENS, ERIK DE CLERCQ AND JAN BALZARINI — 851 Potent differentiation-inducing properties of the antiretroviral agent 9-(2-phosphonylmethoxyethyl) adenine (PMEA) in the rac choriocarcinoma (RCHO) tumor cell model

MARTIN SPITALER, IRENE UTZ, WOLFGANG HILBE, JOHANN HOFMANN AND HANS H. GRUNICKE — 861 PKC-independent modulation of multidrug resistance in cells with mutant (V185) but not wild-type (G185) P-glycoprotein by bryostatin 1

Inflammation and Immunopharmacology

CHRISTINE M. BRAUN, SHAU-KU HUANG, ANNE KAGEY-SOBOTKA, LAWRENCE M. LICHTENSTEIN AND DAVID M. ESSAYAN — 871 Co-regulation of antigen-specific T lymphocyte responses by Type I and Type I cyclic AMP-dependent protein kinases (cAK)

Cardiovascular and Pulmonary Pharmacology

JOHN J. MCGUIRE, DIANE J. ANDERSON, BERNARD J. MCDONALD, RAMANI NARAYANASAMI AND BRIAN M. BENNETT — 881 Inhibition of NADPH-cytochrome P450 reductase and glyceryl trinitrate biotransformation by diphenyleneiodonium sulfate

NARAYANAN VENKATESAN, DURAIRAJ PUNITHAVATHI AND GOWRI CHANDRAKASAN 895 Biochemical and connective tissue changes in cyclophophamide-induced lung fibrosis in rats

Gastrointestinal and Renal Pharmacology

MRINALINI BHATTACHARJEE, TAPAN CHAKRABORTY, CHAYAN GANGULY AND RANAJIT K. BANERJEE 905 Inhibition of gastric mucosal prostaglandin synthetase activity by mercaptomethylimidazole, an inducer of gastric acid secretion—Plausible involvement of endogenous H_2O_2

15 OCTOBER 1998

Commentaries

GIOACCHINO NATOLI, ANTONIO COSTANZO, FRANCESCO GIODO, FRANCESCA MORETTI AND MASSIMO LEVRERO 915 Apoptotic, non-apoptotic, and anti-apoptotic pathways of tumor necrosis factor signalling

KEVIN ST. P. MCNAUGHT, PIERRE-ALAIN CARRUPT, COSIMO ALTOMARE, SAVERIO CELLAMARE, ANGELO CAROTTI, BERNARD TESTA, PETER JENNER AND C. DAVID MARSDEN 921 Isoquinoline derivatives as endogenous neurotoxins in the aetiology of Parkinson's disease

Molecular and Cellular Pharmacology

SASKIA A. B. E. VAN ACKER, GEORGETTE PLEMPER VAN BALEN, DIRK–JAN VAN DEN BERG, AALT BAST AND WIM J. F. VAN DER VIJGH 935 Influence of iron chelation on the antioxidant activity of flavonoids

KATHARINA MERTSCH, TILMAN GRUNE, STEFFEN KUNSTMANN, BURKHARD WIESNER, AXEL M. LADHOFF, WERNER G. SIEMS, REINER F. HASELOFF AND INGOLF E. BLASIG 945 Protective effects of the thiophosphate amifostine (WR 2721) and a lazaroid (U83836E) on lipid peroxidation in endothelial cells during hypoxia/reoxygenation

BUKHTIAR H. SHAH, ZAFAR NAWAZ, SALIM S. VIRANI, IMRAN Q. ALI, SHEIKH A. SAEED AND ANWAR H. GILANI 955 The inhibitory effect of cinchonine on human platelet aggregation due to blockade of calcium influx

EWA JARUGA, ANNA BIELAK-ZMIJEWSKA, EWA SIKORA, JANUSZ SKIERSKI, EWA RADZISZEWSKA, KATARZYNA PIWOCKA AND GRZEGORZ BARTOSZ 961 Glutathione-independent mechanism of apoptosis inhibition by curcumin in rat thymocytes

VIOLA TITTELBACH, JEAN-NICOLAS VOLFF, JEANETTE GIRAY, DIETER RATGE AND HERMANN WISSER 967 Agonist-induced down-regulation of the β_2-adrenoceptor and its mRNA in human mononuclear leukocytes

INGO RUSTENBECK, GEORG EGGERS, HARTWIG REITER, WILFRIED MÜNSTER AND SIGURD LENZEN 977 Polyamine modulation of mitochondrial calcium transport. 1. Stimulatory and inhibitory effects of aliphatic polyamines, aminoglucosides and other polyamine analogues on mitochondrial calcium uptake

INGO RUSTENBECK, DAGMAR LÖPTIEN, KAREN FRICKE, SIGURD LENZEN AND HARTWIG REITER 987 Polyamine modulation of mitochondrial calcium transport. 2. Inhibition of mitochondrial permeability transition by aliphatic polyamines but not by aminoglucosides

CLÁUDIA L. M. SILVA, VALÉRIA M. N. CUNHA, DAYDE L. MENDONÇA-SILVA AND FRANÇOIS NOËL 997 Evidence for ryanodine receptors in *Schistosoma mansoni*

DIETER H. LANG, CATHERINE K. YEUNG, RAIMUND M. PETER, CATHERINE IBARRA, RODOLFO GASSER, KIYOSHI ITAGAKI, RICHARD M. PHILPOT AND ALLAN E. RETTIE 1005 Isoform specificity of trimethylamine *N*-oxygenation by human flavin-containing monooxygenase (FMO) and P450 enzymes: Selective catalysis by FMO3

CHARLES S. MORROW, PAMELA K. SMITHERMAN AND ALAN J. TOWNSEND 1013 Combined expression of multidrug resistance protein (MRP) and glutathione S-transferase P1-1 (GSTP1-1) in MCF7 cells and high level resistance to the cytotoxicities of ethacrynic acid but not oxazaphosphorines or cisplatin

J.-A. Arias-Montaño, W. J. Gibson and J. M. Young 1023 SK&F 96365 (1-[β-[3-(4-methoxyphenyl)propoxy]-4-methoxyphenylethyl]-1*H*-imidazole hydrochloride) stimulates phosphoinositide hydrolysis in human U373 MG astrocytoma cells

Chemotherapy and Metabolic Inhibitors

Marina Landau, Abraham Weizman, Esther Zoref-Shani, Einat Beery, Lina Wasseman, Ofer Landau, Moshe Gavish, Sarah Brenner and Jardena Nordenberg 1029 Antiproliferative and differentiating effects of benzodiazepine receptor ligands on B16 melanoma cells

Chaoyong Zhu, Magnus Johansson; Johan Permert and Anna Karlsson 1035 Phosphorylation of anticancer nucleoside analogs by human mitochondrial deoxyguanosine kinase

Neuroscience

Yumiko Tozawa, Akira Ueki, Shigeo Manabe and Kouji Matsushima 1041 Stress-induced increase in urinary isatin excretion in rats: Reversal by both dexamethasone and α-methyl-*p*-typrosine

Hormones and Growth Factors

Sandra Coecke, Gilda Debast, Ian R. Phillips, Antoine Vercruysse, Elizabeth A. Shephard and Vera Rogiers 1047 Hormonal regulation of microsomal flavin-containing monooxygenase activity by sex steroids and growth hormone in co-cultured adult male rat hepatocytes

Inflammation and Immunopharmacology

Johannes Jöckel, Bernd Wendt and Monika Löffler 1053 Structural and functional comparison of agents interfering with dihydroorotate, succinate and NADH oxidation of rat liver mitochondria

Bart E. VanUffelen, Ben M. de Koster and Jan G. R. Elferink 1061 Interaction of cyclic GMP and cyclic AMP during neutrophil migration: Involvement of phosphodiesterase type III

Cardiovascular and Pulmonary Pharmacology

Karen Johnson-Mills, Elizabeth Arauz, Ronald G. Coffey, Joseph J. Krzanowski, Jr. and James B. Polson 1065 Effect of CI-930 [3-(2*H*)-pyridazinone-4,5-dihydro-6-[4-(1*H*-imidazolyl) phenyl]-5-methyl-monohydro-chloride] and rolipram on human coronary artery smooth muscle cell proliferation

Gastrointestinal and Renal Pharmacology

Teija Oinonen, Tiina Koivisto and Kai O. Lindros 1075 No significant expression of *CYP2E1* in rat liver stellate cells

1 NOVEMBER 1998

Commentaries

György Haskó and Csaba Szabó 1079 Regulation of cytokine and chemokine production by transmitters and co-transmitters of the autonomic nervous system

Antonio Rescigno, Andrea C. Rinaldi and Enrico Sanjust 1089 Some aspects of tyrosine secondary metabolism

Molecular and Cellular Pharmacology

Jean-Christophe Boyer, Marie-Odile Christen, Jean-Louis Balmes and Jean-Pierre Bali 1097 Calcitonin gene-related peptide-induced relaxation of isolated human colonic smooth muscle cells through different intracellular pathways

Jens M. Brown, Gabriele Zwadlo-Klarwasser, Frank Jugert, Wilfried Hamann, Albert Rübben, Hasan Mukhtar and Hans F. Merk 1105 Cytochrome P450 1B1: A major P450 isoenzyme in human blood monocytes and macrophage subsets

Staffan Uhlén, Maija Dambrova, Gunnar Tiger, Douglas W. Oliver and Jarl E. S. Wikberg 1111 Characterization of the enzymatic activity for biphasic competition by guanoxabenz (1-(2,6-dichlorobenzylidene-amino)-3-hydroxyguanidine) at α_2-adrenoceptors. I. Description of an enzymatic activity in spleen membranes

Maija Dambrova, Staffan Uhlén, Christopher J. Welch, Peteris Prusis and Jarl E. S. Wikberg	1121	Characterization of the enzymatic activity for biphasic competition by guanoxabenz (1-(2,6-dichlorobenzylidene-amino)-3-hydroxyguanidine) at α_2-adrenoceptors. II. Description of a xanthine-dependent enzymatic activity in spleen cytosol
Jarl E. S. Wikberg, Maija Dambrova, Staffan Uhlén and Peteris Prusis	1129	Conditions for biphasic competition curves in radioligand binding for ligands subjected to metabolic transformation
Tamás Csont, Tibor Páli, Zoltán Szilvássy and Péter Ferdinandy	1139	Lack of correlation between myocardial nitric oxide and cyclic guanosine monophosphate content in both nitrate-tolerant and -nontolerant rats
C. R. Thomas, S. L. Turner, W. H. Jefferson and C. J. Bailey	1145	Prevention of dexamethasone-induced insulin resistance by metformin
Yuji Nagasaka and Kazuyuki Nakamura	1151	Modulation of the heat-induced activation of mitogen-activated protein (MAP) kinase by quercetin
Marilyn M. Sanders, Angela A. Liu, Tsai-Kun Li, Hong-Yan Wu, Shyamal D. Desai, Yong Mao, Eric H. Rubin, Edmond J. LaVoie, Darshan Makhey and Leroy F. Liu	1157	Selective cytotoxicity of topiosomerase-directed protoberines against glioblastoma cells
Isabel J. Beresford, Fiona J. Harvey, David A. Hall and Heather Giles	1167	Pharmacological characterisation of melatonin mt_1 receptor-mediated stimulation of [^{35}S]-GTPγS binding
Mária Sasvári-Székely, Tatjana Spasokoukotskaja, Melinda Szóke, Zsolt Csapó, Ágnes Turi, Ildikó Szántó, Staffan Eriksson and Mária Staub	1175	Activation of deoxycytidine kinase during inhibition of DNA synthesis by 2-chloro-2′-deoxyadenosine (cladribine) in human lymphocytes
Barbara Wirleitner, Gabriele Baier-Bitterlich, Günther Böck, Bernhard Widner and Dietmar Fuchs	1181	7,8-dihydroneopterin-induced apoptosis in Jurkat T lymphocytes: A comparison with anit-Fas- and hydrogen peroxide-mediated cell death
Claudia Bruhn, Jürgen Brockmöller, Reinhold Kerb, Ivar Roots and Hans-Hubert Borchert	1189	Concordance between enzyme activity and genotype of glutathione S-transferase theta (GSTT1)
Sophia Schedin, Peter Pentchev and Gustav Dallner	1195	Reduced cholesterol accumulation and improved deficient peroxisomal functions in a murine model of Niemann-Pick type C Disease upon treatment with peroxisomal proliferators
Chemotherapy and Metabolic Inhibitors		
Flora E. Arana, José M. Pérez-Victoria, Yolanda Repetto, Antonio Morello, Santiago Castanys and Fancisco Gamarro	1201	Involvement of thiol metabolism in resistance to glucantime in *Leishmania Tropica*
Erland J. F. Demant and Ellen Friche	1209	Kinetics of anthracycline accumulation in multidrug-resistant tumor cells: Relationship to drug lipophilicity and serum albumin binding
Loris G. Baggetto, Maoqing Dong, Jeanine Bernaud, Leon Espinosa, Dominique Rigal, Robert Bonvallet and Eric Marthinet	1219	*In vitro* and *in vivo* reversal of cancer cell multidrug resistance by the semi-synthetic antibiotic tiamulin
Shulamith H. Shafer, Scott H. Phelps and Carol L. Williams	1229	Reduced DNA synthesis and cell viability in small cell lung carcinoma by treatment with cyclic AMP phosphodiestrerase inhibitors
Manijeh Shafiee, Jean-François Griffon, Gilles Gosselin, Alessandra Cambi, Silvia Vincenzetti, Alberto Vita, Staffan Eriksson, Jean-Louis Imbach, and Georges Maury	1237	A comparison of enantioselectivities of human deoxycytidine kinase and human cytidine deaminase
Neuroscience		
Svein Roseth, Else Marie Fyske and Frode Fonnum	1243	Uptake of L-glutamate into synaptic vesicles: Competitive inhibition by dyes with biphenyl and amino- and suphonic acid-substituted naphthyl groups

Hormones and Growth Factors

MAHESH C. SHARMA, ARUN K. AGRAWAL, MEENA R. SHARMA AND BERNARD H. SHAPIRO — 1251 — Interactions of gender, growth hormone, phenobarbital induction on murine Cyp2b expression

Inflammation and Immunopharmacology

WOLFGANG KNECHT AND MONIKA LÖFFLER — 1259 — Species-related inhibition of human and rat dihydroorotate dehydrogenase by immunosuppressive isoxazol and cinchoninic acid derivatives

15 NOVEMBER 1998

Commentaries

CHAD E. BEYER, JEFFREY D. STEKETEE AND DAVID SAPHIER — 1265 — Antioxidant properties of melatonin—An emerging mystery

ROBERT GNIADECKI — 1273 — Nongenomic signaling by vitamin D: A new face of Src

Molecular and Cellular Pharmacology

CÉCILE CALLEJA, CLAUDINE EECKHOUTTE, MAURO DACASTO, GILBERTE LARRIEU, JACQUES DUPUY, THIERRY PINEAU AND PIERRE GALTIER — 1279 — Comparative effects of cytokines on constitutive and inducible expression of the gene encoding for the cytochrome P450 3A6 isoenzyme in cultured rabbit hepatocytes: Consequences on progesterone 6β-hydroxylation

ANNA LORENZEN, HEIDRUN LAND AND ULRICH SCHWABE — 1287 — Activation of various subtypes of G-protein α subunits by partial agonists of the adenosine A_1 receptor

SEON YOUNG NAM, CHUL KOO CHO AND SANG GEON KIM — 1295 — Correlation of increased mortality with the suppression of radiation-inducible microsomal epoxide hydrolase and glutathione S-transferase gene expression by dexamethasone: Effects of vitamin C and E-induced radioprotection

Chemotherapy and Metabolic Inhibitors

HAGAI GINSBURG, OLEG FAMIN, JIANMIN ZHANG AND MIRIAM KRUGLIAK — 1305 — Inhibition of glutathione-dependent degradation of heme by chloroquine and amodiaquine as a possible basis for their antimalarial mode of action

VALÉRIE PAVILLARD, PATRICIA FORMENTO, PHILIPPE ROSTAGNO, JEAN–LOUIS FORMENTO, JEAN–LOUIS FISCHEL, MIREILLE FRANCOUAL, MARIE–CHRISTINE ETIENNE AND GÉRARD MILANO — 1315 — Combination of irinotecan (CPT11) and 5-fluorouracil with an analysis of cellular determinants of drug activity

Neuroscience

MICHAEL GASSEN, GABRIELA PERGANDE AND MOUSSA B. H. YOUDIM — 1323 — Antioxidant properties of the triaminopyridine, flupiritine

ROSARIO DE MIGUEL, JULIÁN ROMERO, RAÚL MUÑOZ, LUCÍA GARCÍA-GIL, SARA GONZÁLEZ, MARIA A. VILLANUA, ALEXANDROS MAKRIYANNIS, JOSÉ A. RAMOS AND J. JAVIER FERNÁNDEZ-RUIZ — 1331 — Effects of cannabinoids on prolactin and gonadotropin secretion: Involvement of changes in hypothalamic γ-aminobutyric acid (GABA) inputs

Hormones and Growth Factors

ELLA KARLSSON, MATS STRIDSBERG AND STELLAN SANDLER — 1339 — Leptin regulation of islet amyloid polypeptide secretion from mouse pancreatic islets

CAROLINE SAUCIER, STEPHEN J. MORRIS AND PAUL R. ALBERT — 1347 — Endogenous serotonin-2A and -2C receptors in Balb/c-3T3 cells revealed in serotonin-free medium: Desensitization and down-regulation by serotonin

Inflammation and Immunopharmacology

TAKASHI KOHGE, EIICHI GOHDA, TAKAYUKI OKAMURA AND ITARU YAMAMOTO — 1359 — Promotion of antigen-specific antibody production in murine B cells by a moderate increase in histone acetylation

LINDY L. THOMSEN, JEAN M. SARGENT, CHRISTINE J. WILLIAMSON AND ALENA W. ELGIE — 1365 — Nitric oxide synthase activity in fresh cells from ovarian tumour tissue: Relationship of enzyme activity with clinical parameters of patients with ovarian cancer

TROY T. ROHN, LAURA K. NELSON, GEORG WAEG AND MARK T. QUINN 1371 U-101033E (2,4-diaminopyrrolopyrimidine), a potent inhibitor of membrane lipid peroxidation as assessed by the production of 4-hydroxynoneal, malondialdehyde, and 4-hydroxynoneal—protein adducts

Gastrointestinal and Renal Pharmacology

ÁGNES GYURASICS, PÁL PERJÉSI AND ZOLTÁN GREGUS 1381 Role of glutathione and methylation in the biliary excretion of selenium. The paradoxical effect of sulfobromophthalein

ZOLTÁN GREGUS, PÁL PERJÉSI AND ÁGNES GYURASICS 1391 Enhancement of selenium excretion in bile by sulfobromophthalein: Elucidation of the mechanism

1 DECEMBER 1998

Commentaries

CATHERINE LAMBERT DE ROUVROIT AND ANDRÉ M. GOFFINET 1403 A new view of early cortical development

KEVIN G. WADDICK AND FAITH M. UCKUN 1411 Innovative treatment programs against cancer. I. Ras oncoprotein as a molecular target

Molecular and Cellular Pharmacology

SUNG HEE CHOI AND SANG GEON KIM 1427 Lipopolysaccharide inhibition of rat hepatic microsomal epoxide hydrolase and glutathione S-transferase gene expression irrespective of nuclear factor-κB activation

ALESSANDRO DALPIAZ, ANDREA TOWNSEND-NICHOLSON, MARGOT W. BEUKERS, PETER R. SCHOFIELD AND ADRIAAN P. IJZERMAN 1437 Thermodynamics of full agonist, partial agonist, and antagonist binding to wild-type and mutant adenosine A_1 receptors

BRUNO GOGLY, WILLIAM HORNEBECK, NICOLE GROULT, GASTON GODEAU AND BERNARD PELLAT 1447 Influence of heparin(s) on the interleukin-1-β-induced expression of collagenase, stromelysin-1, and tissue inhibitor of metalloproteinase-1 in human gingival fibroblasts

ELIZABETH M. WALKER, JAYSON R. BISPHAM AND STEPHEN J. HILL 1455 Nonselective effects of the putative phospholipase C inhibitor, U73122, on adenosine A_1 receptor-mediated signal transduction events in Chinese hamster ovary cells

ANA M. LEAL, BEGOÑA RUIZ-LARREA, ROSA MARTÍNEZ AND MERCEDES LACORT 1463 Cytoprotective actions of estrogens against *tert*-butyl hydroperoxide-induced toxicity in hepatocytes

SUKANYA CHAKRABARTI, PULAK ROY AND DIPAK DASGUPTA 1471 Interaction of the antitumor antibiotic chromomycin A_3 with glutathione, a sulfhydryl agent, and the effect upon its DNA binding properties

FABIO M. PULICINELLI, PAOLO GRESELE, MARGHERITA BONUGLIA AND PIER PAOLO GAZZANIGA 1481 Evidence for separate effects of U73122 on phospholipase C and calcium channels in human platelets

GUILLERMO VELASCO, PATRICIA PASSILLY, MANUEL GUZMÁN AND NORBERT LATRUFFE 1485 Loss of response of carnitine palmitoyltransferase I to okadaic acid in transformed hepatic cells

ANGELO SPINEDI, SERAFINA OLIVERIO, FEDERICA DI SANO AND MAURO PIACENTINI 1489 Calpain involvement in calphostin C-induced apoptosis

DORIS KLOOR, SYLVIA FUCHS, FOTIOS PETROKTISIS, URSULA DELABAR, BERND MÜHLBAUER, ULRICH QUAST AND HARTMUT OSSWALD 1493 Effects of ions on adenosine binding and enzyme activity of purified S-adenosylhomocysteine hydrolase from bovine kidney

Chemotherapy and Metabolic Inhibitors

VICTORIA J. SPANSWICK, JEFFREY CUMMINGS, ALISON A. RITCHIE AND JOHN F. SMYTH 1497 Pharmacological determinants of the antitumour activity of mitomycin C

Inflammation and Immunopharmacology

JIH-PYANG WANG, SHUE-LING RAUNG, LI-JIAU HUANG AND SHENG-CHU KUO 1505 Involvement of cyclic AMP generation in the inhibition of respiratory burst by 2-phenyl-4-quinolone (YT-1) in rat neutrophils

GEOFFREY M. THIELE, DEAN J. TUMA, JACQUELINE A. MILLER, KIRK M. WEGTER, THOMAS L. MCDONALD AND LYNELL W. KLASSEN 1515 Monoclonal and polyclonal antibodies recognizing acetaldehyde—protein adducts

GUIZOT C. TCHOUMKEU—NZOUESSA AND GÉRARD REBEL 1525 Differential effect of ebselen on compound 48/80- and Anti-IgE-induced histamine release from rat peritoneal mast cells

Gastrointestinal and Renal Pharmacology

ALBERT SHEN AND FRED MITCHELSON 1529 Muscarinic M_2 receptor-mediated contraction in the guinea pig Taenia Caeci: Possible involvement of protein kinase C

15 DECEMBER 1998

Commentaries

JEAN FAVERO AND VIRGINIE LAFONT 1539 Effector Pathways Regulating T Cell Activation

CARL D. BORTNER AND JOHN A. CIDLOWSKI 1549 A Necessary Role for Cell Shrinkage in Apoptosis

Molecular and Cellular Pharmacology

SOLANGE H. KORN, EMIEL F. M. WOUTERS, GERRTJAN WESSELING, JAN-WILLEM ARENDS AND FREDERIK B. J. M. THNNISSEN 1561 Interaction between glucocorticoids and B_2-agonists: α and β glucocorticoid-receptor mRNA expression in human bronchial epithelial cells

HEGE VAAGENES, LISE MADSEN, DANIEL K. ASIEDU, JOHAN R. LILLEHAUG AND ROLF K. BERGE 1571 Early modulation of genes encoding peroxisomal and mitochondrial β-oxidation enzymes by 3-thia fatty acids

ENZO TRAMONTANO, GIOVANNA PIRAS, JOHN W. MELLORS, MONICA PUTZOLU, HENGAMEH Z. BAZMI AND PAOLO LA COLLA 1583 Biochemical characterization of HIV-1 reverse transcriptases encoding mutations at amino acid residues 161 and 208 involved in resistance to phosphonoformate

JOHN N. HASELDEN, DAVID H. HUTSON AND PETER F. DODDS 1591 The metabolism of 3-phenoxybenzoic acid-containing xenobiotic triacylglycerols *in vitro* by pancreatic, hormone-sensitive and lipoprotein lipases

JOHN N. HASELDEN, PETER F. DODDS AND DAVID H. HUTSON 1599 The metabolism of the xenobiotic traicylglycerols, rac-1- and sn-2-(phenoxybenzoyl)-dipalmitoylglycerol, following intravenous administration to the rat

G. B. SAJITHLAL, PANDARINATHAN CHITHRA AND GOWRI CHANDRAKASAN 1607 Effect of curcumin on the advanced glycation and cross-linking of collagen in diabetic rats

BERND LORENZ, THOMAS SCHLÜTER, RALF BOHNENSACK, GABRIELA PERGANDE AND WERNER E. G. MÜLLER 1615 Effect of flupirtine on cell death of human umbilical vein endothelial cells induced by reactive oxygen species

BARBARA PAVAN AND A. P. IJZERMAN 1625 Processing of adenosine receptor agonists in rat and human whole blood

GUIDO SCUTARI, MICHELA MARIAN, ALBERTO BINDOLI, MARIA PIA RIGOBELLO, DIANA DEONI, EZIO VINCENTI AND MARCANTONIO BRAGADIN 1633 Mitochondrial effects of L-ropivacaine, a new local anesthetic

MARÍA P. CARRASCO, JOSEFA L. SEGOVIA AND CARMEN MARCO 1639 Incorporation of exogenous precursors into neutral lipids and phospholipids in rat hepatocytes: effect of ethanol *in vitro*

Neuroscience

PAUL G. LYSKO, KATHRYN A. LYSKO, CHRISTINE L. WEBB, GIORA FEUERSTEIN, PAMELA E. MASON, MARY F. WALTER AND R. PRESTON MASON — 1645 Neuroprotective activities of carvedilol and a hydroxylated derivative: Role of membrane biophysical interactions

Gene Expression and Development

JONATHAN T. HAMM, DAVID G. ROSS, VICKI M. RICHARDSON, JANET J. DILIBERTO AND LINDA S. BIRNBAUM — 1657 Methoxyresorufin: An inappropriate substrate for CYP1A2 in the mouse

Inflammation and Immunopharmacology

MIKAEL HEIMBÜRGER, RICHARD LERNER AND JAN PALMBLAD — 1661 Effects of antirheumatic drugs on adhesives of endothelial cells and neutrophils

1671 Contents of Volume 56

1686 Author Index for Volume 56

1691 Subject Index for Volume 56